

Territorial organization of Mongolian pastoral livestock husbandry in the transition to a market economy

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Introduction

The potential for herding households to become independent, privately-operating units is currently being explored in Mongolia. But improving the living standards of herders and at the same time enabling them to remain 'valley keepers', or custodians of their local environment, will not be achieved by focusing exclusively on households as single units with private herds. In fact, herding households have never been as individualistic as at present, not even prior to the 1921 Revolution. They formed collective units of ownership within which they were able to decide some of their own socio-economic problems.

The problems facing herders need to be addressed through multidisciplinary research capable of long-term projection. Privatization in contemporary Mongolia has been carried out without detailed research. It has been limited to redistributing the assets of pastoral collectives to existing herders and other individual householders. The intended result of the privatization programme is that herders will operate as individual units, independent of each other. This would run counter to the herders' own interests and would turn back the clock several centuries. Efforts to increase herders' incomes and improve their living conditions by means of better labour organization and easing of social problems requires the reversal of these backward steps.

Research has shown that policy measures not in accordance with our livestock farming traditions are inappropriate. It is important to remember the lessons learned from earlier periods. A revolution does not mean that everything which existed previously should be ignored. The scientifically-groundless direction of current policies could have serious consequences. We should pay more attention to asking what can be changed and how. In order to understand how Mongolian pastoral livestock husbandry could be reorganized, a programme of research should be carried out.

Not everyone is in a position to determine the most appropriate policies for reorganizing pastoral livestock husbandry. Policies made on the basis of theory alone, or following brief and irregular

visits to the countryside, are little more than empty hypotheses. The many practical problems that exist for herders can only be resolved by means of careful, detailed research into the vital links between ecology, livestock and herders.

During 30 years under collectivization (1959-89), questions of territorial organization and land management were ignored or avoided. As a result, a substantial portion of natural pasture has become degraded and traditional techniques have been forgotten. Livestock development had become stagnant.

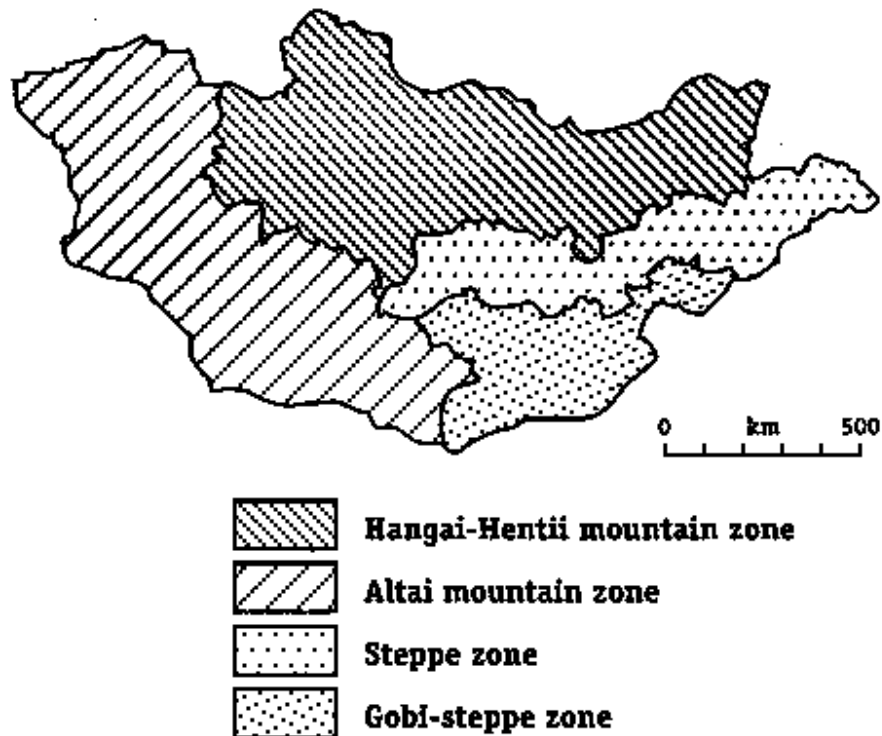
The present programme of privatization also began without considering the question of territorial organization, leading to further policy mistakes. In this paper we make suggestions for possible directions for livestock development under the market economy, with a particular focus on territorial organization.

During our field research, we found that if herders perceive a given course of action to be in their own best interest, they will not shy away from financial or other difficulties in order to follow it. The interests of herders themselves should therefore be the starting point for resolving problems in livestock development.

Pastoral livestock husbandry under the market economy

ON THE BASIS OF ECOLOGICAL CONDITIONS, geographical boundaries and herding practices, four major ecological-territorial zones can be distinguished in Mongolia: the Hangai-Hentii mountain zone, the Altai mountain zone, the Steppe zone and the Gobi-steppe zone

Figure 1 MAP OF REGIONAL VARIATION SEASONAL PASTURE USE BY ANIMAL SPECIES



For a millennium, Mongolian herders have had to deal with problems concerning the rational use of natural resources and overcome the negative consequences of ecological hazards. Traditionally, herders have resolved these principally by means of cooperative labour arrangements. This cooperation among herders gave rise to distinct socio-economic units, each with an identifiable territory and boundaries. These units evolved in accordance with local ecological conditions and the requirements of livestock husbandry rather than with the interests of the herders as individuals. Prior to collectivization, all herders lived within this framework of distinct socio-economic units and geographical areas, which permitted problems related to labour organization and social life to be resolved locally.

SOCIO-ECONOMIC HERDING UNITS

Cooperation among private family households gave rise to a residential group known as a *khot ail*. The *khot ail* can be characterized as a socio-economic unit within which the member households cooperated in everyday herding tasks. In particular, they took turns pasturing the herds of the whole group on a day-to-day basis. This practice is known as a short *khishig ödör* (lucky day).¹

A number of *khot ail* would settle together around a spring or a well in the Gobi and steppe zone, or along small water courses in the forest steppe zone. Such a group is known as *neg usniihan* (users of the same water source). *Neg usniihan* had long *khishig ödör* and cooperated in such activities as felt-making, firewood cutting and conducting short-distance transport caravans using pack animals.

Within a given area, bounded geographically and characterized by relatively uniform environmental conditions, neighbouring *neg usniihan* with similar livestock husbandry practices and technology constituted a *neg nutgiinhan* (people of the same area). There were 2000 *neg nutgiinhan* over the whole country.

Most decisions of local social and economic importance were taken more or less independently at the level of these traditional *neg nutgiinhan* units. Each had its own local centre, usually with a temple, storage facilities, and perhaps a few small buildings. A range of activities was organized at the centre, including religious and ritual or cultural functions, public education, the coordination of local and long-distance transport, and the sale of handicrafts and other marketing activities. It therefore played an important role in the social and economic lives of herders. It is now known that at least 700, and perhaps as many as 1300, temples and *jas*² served as centres of *neg nutgiinhan* throughout Mongolia.

Both the *neg nutgiinhan* and the *khot ail* were eroded as institutions with the major drive towards collectivization. The *neg nutgiinhan* were abandoned or undermined through the destruction of the temples and *jas*³ at their centres, and the *khot ail* was undermined by a gradual change in the division of labour under collectivization.

The smaller, voluntary cooperatives formed during the early stages of collectivization (1930s and 1940s), and most contemporary brigades and teams immediately prior to the recent start of decollectivization (from 1991), were not organized in an abstract manner. They were in fact based on the *neg nutgiinhan* socio-economic and territorial units.

The differences and similarities of organization between the traditional *khot ail*, the *suur* under collectivized production, and what is suggested here to be a re-emergent, contemporary *khot ail* appropriate to conditions of the market economy have been summarized in Table 1.

Under the market economy, the re-emergent *khot ail* could once again form the basis of socio-economic units based on the traditional *neg nutgiinhan*, combining the most appropriate features of the traditional and contemporary institutions.

It is our belief that privatization and the redistribution of the property of the collectives should not have begun with livestock. The first objective should be to determine the appropriate form of socio-economic organization. The programme of privatization should begin by specifying the boundaries of the *neg nutgiinhan*, both socially and territorially. The appropriate territorial boundaries should be decided on the basis of ecological conditions and should take into account the pattern of land use within and among neighbouring *neg nutgiinhan*. Decisions can then be made within the *neg nutgiinhan* group as to how to divide areas of pasture among the individual *khot ail* members.

The appropriate location of the local centre also needs to be decided. Important services could be provided at the centres, including small-scale livestock product facilities. Decisions will soon need to be taken at the level of the *neg nutgiinhan* themselves about what kinds of products can be produced, what kinds of technical innovations are necessary and feasible, what marketing

strategies need to be adopted, with whom they are in competition, and with whom they need to cooperate and coordinate their activities.

table 1 BASIC UNITS OF PASTORAL LIVESTOCK HUSBANDRY; THREE HISTORICAL FORMS COMPARED

Pastoral Livestock	Land Tenure	Labour Organization	Herd Structure and Ownership
Production Unit			
Traditional <i>Khot ail</i>	• Customary use of a specific area	• 3-5 families	• Private herds
	• Customary ownership of winter and spring pastures within area	• Short <i>khishil ödör</i> (cooperative herding on daily basis)	• Diverse species composition
	• Nomadic moves made strictly in accordance with ecological conditions		
<i>Suur</i> under collectivization	• No regular customary or designated use of particular area	• Usually a single family	• Collective herds predominant
	• Nomadic moves did not necessarily correspond to ecological conditions	• Inflexible labour supply/allocation	• High level of special specialization at <i>suur</i> level
		• No cooperative herding (<i>khishig ödör</i>)	
Re-emergent <i>khot ail</i> under market economy (proposed)	• Group level rights over particular areas	• 3-5 families	• Mixed herd ownership (private and collective)
	• Certified, secure tenure of winter and spring pastures within area	• Long and short <i>khishig ödör</i>	• Emphasis on productivity per animal
	• Nomadic moves correspond to ecological conditions		

Our research on the organization of the traditional *khot ail* shows that it is perfectly possible for a single administrative unit to include several socio-economic units. That means the contemporary *sum* (district) and *aimag* (province) can continue to exist as administrative units. However, it is not at all clear to us that the traditional *khoshuun* administrative unit, along with the pre-collectivization pattern of territorial division, should be re-introduced.

LAND TENURE

Mongolian pastoral livestock husbandry has evolved together with its ecological resource base. Historical records show that the *khot ail* and *neg nutgiinhan* existed as socio-economic units even prior to 1206 when an independent Mongolian empire was established.

Private households exercised customary use rights over specific areas, defined in relation to the ecological resource base, and they customarily owned areas of pasture which they used during winter and spring.

In addition, they had customary rights to areas for common, rotational summer grazing. Some of these traditional, customary rights continue to exist even today. For example, it has not been forgotten that unwritten, customary laws demanded high penalties for unauthorized access to someone else's pasture.

With long experience, herders developed a rich body of knowledge of herding skills and methods relevant to a given area they passed from generation to generation. We are currently witnessing many adverse changes in environmental conditions and livestock herding traditions. The state of the pastoral environment has not yet deteriorated to the point of dramatic consequences. In our opinion, however, the downward trend is a direct result of past single-purpose planning approaches and policies which ignored the scientific and practical value of the traditional methods and skills of Mongolian herders.

We consider that collectivization marked the starting point for costly errors in relation to land tenure and pastoral techniques. Immediately before, during and after the main period of collectivization, many *negdel* (collective) members migrated to the major urban centres and rural district centres. During the *khashaajuulakh* campaign,⁴ many herders left their customarily-owned winter and spring shelters in order to settle at new ones. A dramatic increase in the number of animals kept by the *suur* as compared with the traditional *khot ail*, and the herding of a much larger number of milk animals at one place for longer periods, led to excessive pressure on pasture areas. For these reasons, many customary pasture areas and seasonal camps were abandoned.

The result of such changes was that the vital links between herders, livestock and their environment have been broken and valuable traditional herding methods and skills have been lost. Many herders no longer know the place where their grandparents customarily settled, and often livestock is being grazed under unsuitable ecological conditions.

In recent years, some herders have begun to move unsystematically and gain uncontrolled access to grazing in the territories of neighbouring brigades and districts. In order to guard against this, other herders have adopted the defensive and unprecedented strategy of spending all four seasons at their winter and spring places. If they perceive that their important winter and spring pastures are likely to be grazed by others during other seasons, the customary users of those areas may choose to remain in those pasture areas themselves to prevent such encroachment. As a consequence, substantial areas of pasture have become damaged through overgrazing.

Land use policy both within and among socio-economic units must be based on a better understanding of the ecological parameters of livestock production. It is possible to design a land use policy that can increase productivity and improve the contribution of the pastoral livestock sector to the national economy at the same time as protecting pasture quality. Over the 30-year period of collectivization, the trends described here led to a breakdown in traditional patterns of pastoral land tenure. Such policy mistakes have become part of official legislation, and little has been done to correct them.

For example, the territory of Ugiinuur district in Arkhangai province was carved out of what had been the summer grazing area of five *khoshuun* in the period before collectivization. Consequently it lacked areas suitable for winter and spring grazing and the herders of Ugiinuur district had to move frequently. The area suffered a heavy *dzud* (a natural hazard during winter and spring caused by a sudden and heavy snowfall or frost) once every five years.

Land use policy needs to be based on an appropriate combination of pasture utilization and improvement. This can be fostered best when each socio-economic unit, such as *neg nutgiinhan* or *khot ail*, has secure tenure over a particular, designated area. This can contribute to effective pasture utilization by allowing for the systematic improvement of pasture areas by means of irrigation, manuring and other measures. With secure tenure, it would become more likely that land owners would show an interest in cultivating hay and fodder crops with the aim of generating a more stable supply of fodder for their livestock. New approaches such as fencing and rotational use of pasture would also become possible.

Moves are currently under way in Mongolia to establish appropriate scales of land value in accordance with fertility. Economic measures to control the stocking rate will be implemented on the basis of the grazing capacity of different pasture areas. More needs to be done, however, in thinking through questions of socio-economic organization and exploring the potential for *neg nutgiinhan* to operate as groups able to manage their own land resources under a market economy.

Rural policy under collectivization was focused almost entirely on livestock without taking into consideration the resource base of effective livestock husbandry, most notably, pasture land. Such single-purpose planning has been the cause of many past policy mistakes. Unfortunately, the new government and other political forces seem inclined to repeat the mistakes of the old regime. They appear to have only a superficial understanding of the relationships of livestock, herders and pasture land.

LABOUR ORGANIZATION

HERDERS' LABOUR IS REPETITIVE AND CYCLICAL, but at the same time, very demanding. While they need no formal training or qualifications, herders face unpredictable natural hazards and have to work under conditions that test the limits of their endurance. Before collectivization, private households had a well-organized system of reciprocal labour cooperation and a division of labour tasks. Labour inputs were planned and organized as necessary, according to the duration of the job in hand. For example, the duration of the *khishig ödör* in the *khot ail*

was one day, in *neg usniihan* 1-3 months and in *neg nutgiinhan* even longer, with seasonal encampments.

The persistence of the traditional *khot ail*, and its re-emergence today, show that herders can benefit when individual households join together and cooperate as a unit. The fact that *negdel* members often experienced problems with labour organization tells us a great deal about the true nature of collective arrangements.

The *negdels* consistently failed to mobilize their members in cooperative labour arrangements. Members' activities were restricted to looking after the animals in their individual care, rather than cooperating in other kinds of livestock and agricultural work. This shows a lapse in Mongolian herding traditions.

It is unlikely that the social problems of herders can be solved successfully at a low level (*khot ail*, *neg usniihan*). Rather, they need to be addressed at the level of the socio-economic unit itself (*neg nutgiinhan*), with a clearly defined and officially recognized territory. It is at this level that the proper conditions for bringing up a young generation of skilled Mongolian herdsman can be created.

HERD STRUCTURE AND OWNERSHIP

THE FIVE KINDS OF MONGOLIAN LIVESTOCK each have different ecological requirements for successful growth. Demand for their products - meat, milk, wool, hides and skins - also varies.

The current distribution of livestock by ecological zone can be classified as rational, optimal, and irrational (Bazargür, 1978). Animals distributed rationally by ecological zone are normally highly productive and yield products with very low costs or levels of input. The distribution of indigenous Mongolian breeds in the areas for which they are ecologically best adapted is a good example of this pattern. Livestock development in Mongolia is concerned with intensifying production and increasing specialization where appropriate. This must be based on an ecologically rational distribution of livestock species and breeds.

Before collectivization, private family households usually kept all five kinds of livestock, i.e. camels, horses, cattle, sheep and goats. Local breeds predominated, highly adapted to prevailing ecological conditions. Other breeds were kept for auxiliary purposes, and for upgrading the genetic stock of the main types of animal in which different households specialized.

Nomadic moves were usually made between different ecological zones, such as from Gobi to forest steppe. Herders usually moved their more ecologically-versatile animals, particularly sheep and horses, over longer distances, leaving their other animals at semi-permanent camps. Those herders who were relatively specialized in large stock such as yak and camels, had virtually no need to make long-distance moves. Long-distance moves were made only when necessary to maintain livestock condition and to satisfy certain basic economic requirements of the herders.

In more recent years, nomadic moves have on the whole become shorter in distance. However, ecological zones vary with altitude as well as with latitude. The major difference in nomadic patterns today is that herders are now expected to move vertically - up and down mountain slopes, and along or around water sources - within a more restricted area.

The *suur* under collectivization kept highly specialized herds. We consider this to be one of the greatest achievements of collectivization and believe that some degree of herd specialization would also be of great importance under market relations. During privatization, a large share of the collectives' herds were distributed among their members. Most members received a number of animals of different species. Keeping mixed-species herds is a defensive strategy against the high level of risk faced by herders. Many herders may wish to keep a small number of cattle, riding horses and pack camels. However, the keeping of mixed herds does not preclude some degree of specialization.

In our research we have identified six main regional types of animal husbandry, varying principally by ecological zone (see Figure 2). It is important that future changes in herd structure and composition be made in accordance with the ecological conditions prevailing in these regional types.

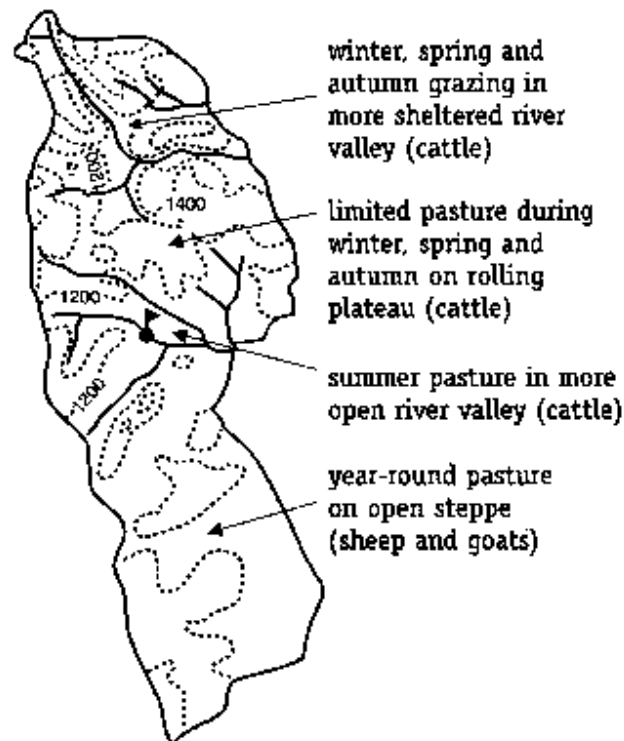
Summary of proposed changes in the organization of pastoral livestock husbandry

1. LAND TENURE

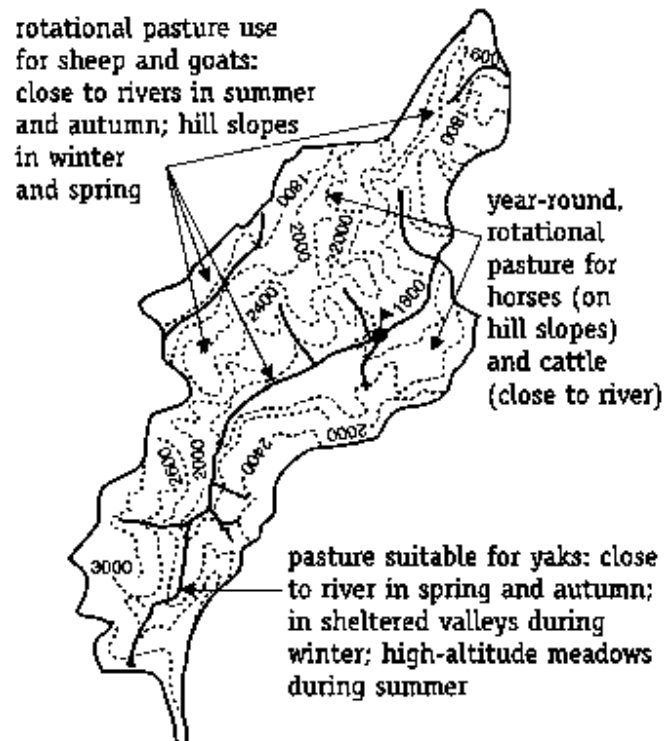
- a. Patterns of land tenure should relate to the six main regional types of animal husbandry identified above.
- b. The territorial and social boundaries of individual socio-economic units (*neg nutgiinhan*) need to be determined in accordance with local ecological parameters and patterns of land tenure.
- c. The administrative structure of the state should be revised so that the *neg nutgiinhan* socio-economic units form the most basic level.
- d. An economic assessment of land values within the newly-established administrative/territorial units needs to be carried out, in relation to ecological requirements. e. Land within each of these units should be allocated to the individual *khot ail*. Pastures for use during winter and spring seasons should be clearly assigned to individual *khot ail*, while other areas may be grazed in common. All cultivated land should be certified.

Figure 2 TYPES OF ANIMAL HUSBANDRY ACCORDING TO ECOLOGICAL ZONES

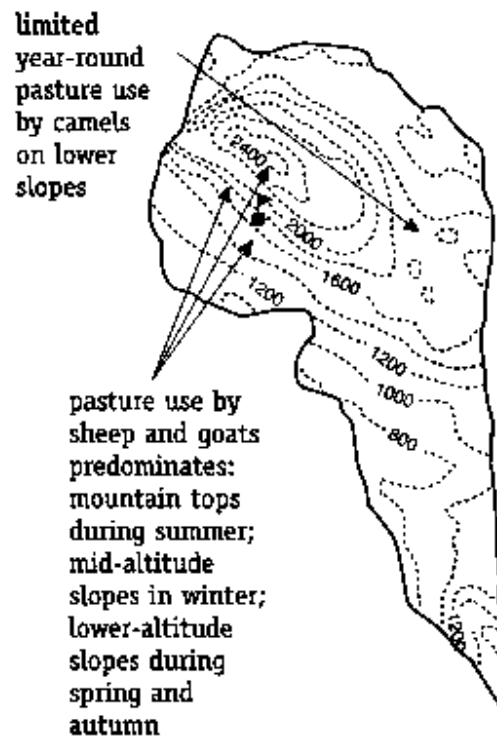
(1) HENTII AIMAG



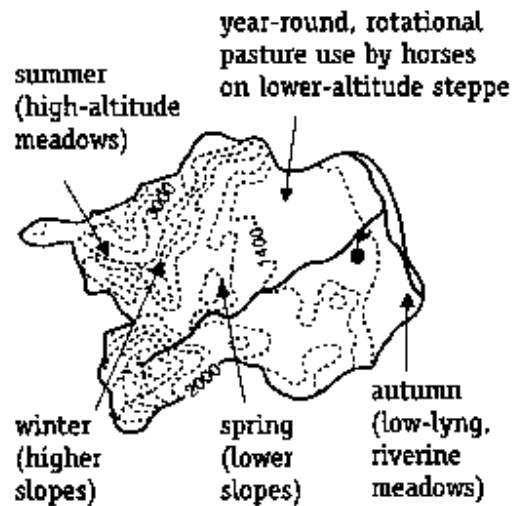
(2) ARKHANGAI AIMAG



(3) GOBI-ALTAI AIMAG

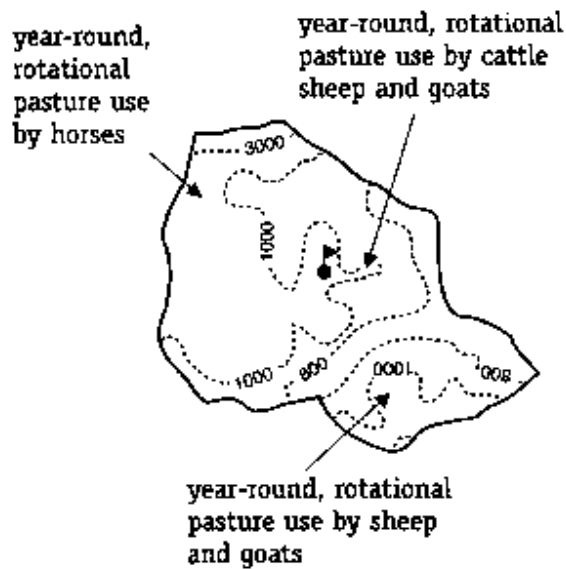


(4) HOVD AIMAG



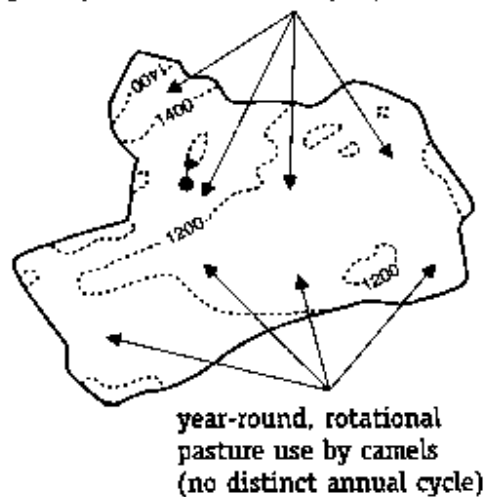
clear altitudinal rotation of pasture use as shown, sheep and goats predominate; also some cattle

(5) SUBKHBAATAR AIMAG



(6) DUNDGOBI AIMAG

year-round, rotational pasture use by sheep and goats (no distinct annual cycle)



2. ORGANIZATION OF LABOUR AND PROVISION OF SERVICES

a. Services for herders, including small-scale processing facilities and other machinery, should be provided at the local centres of individual socio-economic units. The former collectives should be re-organized to coordinate these activities.

b. The organization of cooperative labour inputs should take place at the appropriate institutional level, i.e. in the following sequence: *khot ail*, *neg usniihan*, *neg nutgiinhan*.

c. A pattern of herding following a long *khishig ödör* will enable some herders to settle for longer periods at the service centre of their *neg nutgiinhan*, and to benefit from the provision of services. Regular nomadic moves could be replaced by *otor*.

d. Traditional herding skills and methods should be revived and younger or new herders trained in them.

3. HERD STRUCTURE AND COMPOSITION

The size and species structure of herds, and the stocking rate, should be matched closely with local ecological capability.

a. Socio-economic units in the Hangai mountain areas should be relatively specialized in yak breeding. The share of the regional livestock population accounted for by yak should be 60 percent and sheep 30 percent, expressed in terms of sheep units.

b. Socio-economic units in the hill areas of the forest steppe zone would be relatively specialized in indigenous breeds of Mongolian cattle and sheep, in the respective proportions 50 percent (cattle) to 40 percent (sheep).

c. Socio-economic units in the ecotone between forest steppe and the northern steppe zone should relatively specialize in sheep rearing. Herd composition should be around 70 percent sheep and 20 percent horses.

d. In the ecotone between Gobi and desert steppe the major share of overall livestock should be made up of small ruminants (60 percent sheep, 30 percent goats).

e. The Gobi plateau and small hill areas can be grazed mostly by camels and small livestock (50 percent camels, 40 percent sheep and goats).

f. In the mountain areas of the Gobi zone the main species should be goats (50 percent), camels (20 percent) and sheep (20 percent).

Research Methodology THE PRINCIPAL MEANS OF MANAGING THE interrelated ecological and social factors in pastoral livestock production is nomadic mobility. We have conducted research in all 18 provinces of the country, involving a sample of 106 districts (about one-third of the total). The major task was to map the annual pattern of nomadic moves of some 10 000 herding households, including the number of moves and the distances moved. On the basis of this work we developed our criteria for the four main regional types of animal husbandry, including the specification of territorial, social and ecological boundaries, and the relationship between livestock distribution and key ecological parameters.

Significant differences were identified between these regional types in the limiting ecological factors to which the prevalent domestic livestock species and breeds were adapted. We were also able to demonstrate regional differences in altitude and latitude, distances, and annual number of moves made by individual *suur* (Bazargür et al., 1990).

More detailed research was carried out in Övörkhangai Province. During the earlier stages of our research we mapped the key ecological parameters within the province and related these to the appropriate scale of resource unit for pastoral management. On the basis of this data we divided the territory of Övörkhangai Province into six regional types of resource unit (Bazargür et al., 1989).

In our current work we have included the entire country, with the aim of developing recommendations for future livestock development. We hope that this basic description of the diverse range of pastoral resource unit types across the country can serve as a planning tool for land use policy, and help decide the appropriate unit of socio-economic organization in which land use policy decisions should be taken. This programme of research and policy advice is composed of three major components: (i) description and regionalization of physical resource units, on the basis of the distribution of ecological zones, social and administrative boundaries; (ii) review of key ecological parameters for livestock production in relation to biological requirements of different animal species; and (iii) description of the pattern of nomadic mobility by regional type, and analysis of the major changes in recent decades.

Endnotes

1. The 'duration' of *khishig ödör* depends on the herding 'shift': in a 'short' *khishig ödör*, herders take turns on a daily basis, while a 'long' *khishig ödör* may involve a herder being away from the *ger* for a week or more at a time.
2. Herding unit of the temples.
3. Virtually all of these were destroyed during the violent repression of religion during the 'Stalinist' period of the late 1920s and 1930s.
4. The construction of livestock shelters and fences during the 1930s and 1940s.
5. This would have to rely on some measure of collective responsibility for the organization of labour whereby certain people would be paid to herd livestock, cut hay and perform other tasks, perhaps on the basis of a rotation, allowing others to remain in or around the centre.

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